REMARKS

This Amendment is filed in response to the Office Action mailed on October 31,

2005. All objections and rejections are respectfully traversed.

Claims 1 to 54 are pending in the application

Claims 2-4, 9, 13-15, 21, 22, and 24-54 are allowed

At paragraphs 1-2 of the Office Action, claims 1, 6, 7, 12, 17, 20, and 23 were re-

jected under 35 U.S.C. §103 as being unpatentable over Hoffman et al., US Patent No.

6,094,435, hereinafter Hoffman, in view of Bronstein et al., US Patent No. 6,735,670,

hereinafter Bronstein.

The present invention, as set out in independent claim 1, comprises in part:

1. In an intermediate node of a data network that comprises one or more virtual
local area networks (VLANs), the intermediate node containing a forwarding da-
tabase comprising one or more forwarding database entries, a method for control-
ling flooding of packets on a VLAN comprising the steps of:
    *establishing a limit that indicates a number of forwarding database en-
tries that may be associated with the VLAN*;
    determining if a number of forwarding database entries associated with the
VLAN matches the limit established for the VLAN; and
    if so, performing an action for controlling the flooding of packets on the
VLAN.

Hoffman discloses a method for detecting and handling congestion on an output

port of a multi-layer switch. See col. 5, lines 6-8. In the method, congestion is detected

when a QOS output queue exceeds a certain threshold value, and in response packets des-

tined for the QOS output queue are randomly discarded. See col. 22, lines 51-63. Fur-

thermore, traffic flows, negotiated using the RSVP protocol, are examined to determine which traffic flow misbehaved and exceeded its reserved bandwidth, thus causing the QOS output queue congestion. See col. 21, line 66 to col.22 line 20. Determining the misbehaving traffic flow involves counting the number of times a packet from each traffic flow is directed to the QOS output queue, and comparing the count with the actual RSVP reserved bandwidth. See col. 22, lines 23-50. Then, future incoming packets of the misbehaving traffic flow are adjusted to a lower priority to prevent the traffic flow from again congesting at the QOS output queue. See col. 22, lines 64-67.

By way of background, Bronstein describes a forwarding table using a one-way hash table and a CAM. The hash table in Bronstein is limited to one MAC address per entry to eliminate the additional time required to search a collision linked list in the event multiple keys hash to the same entry in the hash table. The CAM is used to perform the forwarding information retrieval function. Bronstein's goal is to speed up the forwarding decision by limiting the memory look-up operation, which is accomplished by limiting the information in an entry of the hash table.

Applicant respectfully urges that Bronstein and Hoffman taken alone or in combination do not teach, disclose, or suggest, Applicant's claimed novel step of *establishing a limit that indicates a number of forwarding database entries that may be associated with the VLAN*. In further detail, each entry in the database is associated with an entity that is accessible to the intermediate node. Limiting the number of entries in a database prevents one VLAN from flooding a CAM. In sharp contrast, Hoffman only describes a queue with a threshold that uses a RED algorithm for randomly discarding packets.

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There is no suggestion of limiting the number of entries in a database associated with a VLAN to limit flooding because the VLAN is limited from using the entire CAM. Additionally, Bronstein is only reducing the look-up time in a hash table by limiting the information in an entry. There is no suggestion in Bronstein of limiting the number of entries of a database associated with a VLAN to reduce flooding.

Furthermore, there is no disclosure or suggestion in either Hoffman or Bronstein of fixing the problem of one VLAN using the entire CAM because the VLAN entries are flooded, which results in all other VLANs having to be relearned. Applicant's claimed invention solves the problem by *establishing a limit that indicates a number of forwarding database entries that may be associated with the VLAN*. The limit on the number of entries for one VLAN, prevents one VLAN from using the entire CAM.

Additionally, Bronstein and Hoffman teach away from Applicant's claimed invention by teaching of congestion methods and not a novel technique for limiting the use of a CAM by *establishing a limit that indicates a number of forwarding database entries that may be associated with the VLAN*. The limit on the number of forwarding database addresses entries for one VLAN allows the database to store entries for other VLANs. Therefore, allowing many VLANs to use the CAM. Neither Bronstein nor Hoffman teach or suggest the unique technique of limiting the database entries of one VLAN to allow many VLANs to use the CAM.

Accordingly, Applicant respectfully urges that the Hoffman patent, and the Bronstein patent, either taken singly or taken in any combination are legally insufficient to render the presently claimed invention obvious under 35 U.S.C. § 103 because of the ab-

sence in each of the cited patents of Applicant's claimed novel *establishing a limit that indicates a number of forwarding database entries that may be associated with the VLAN.*

At paragraph 3 of the Office Action, claims 5 and 15 were rejected under 35 U.S.C. §103 as being unpatentable over Hoffman and Bronstein and in further view of Bare, US Patent No. 6,556,541, hereinafter Bare.

At paragraph 4 of the Office Action, claims 8, 10, 11, and 19 were rejected under 35 U.S.C. §103 as being unpatentable over Hoffman and Bronstein, and in further view of Gleeson et al., US Patent No. 6,763,023, hereinafter Gleeson.

Applicant respectfully notes that claims 5, 8, 10-11, 16, and 19 are dependent claims that depend on independent claims believed to be in condition for allowance. Accordingly, claims 5, 8, 10-11, 16, and 19 are believed to be in condition for allowance.

All independent claims are believed to be in condition for allowance.

All dependent claims are dependent from independent claims which are believed to be in condition for allowance. Accordingly, all dependent claims are believed to be in condition for allowance.

Favorable action is respectfully solicited.

Please charge any additional fee occasioned by this paper to our Deposit Account

No. 03-1237.

Respectfully submitted,

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